

PRO

PATENTS
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Penio S. Penev, et al. **Examiner:** Unassigned
Serial No: Unassigned **Art Unit:** Unassigned
Filed: Herewith **Docket:** 14427 (NEC11101)

For: FAST OPTIMAL LINEAR APPROXIMATION Dated: July 31, 2001
OF THE IMAGES OF VARIABLY ILLUMINATED
SOLID OBJECTS FOR RECOGNITION

Assistant Commissioner for Patents
United States Patent and Trademark Office
Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. Basri, R. et al., "Lambertian Reflectance and Linear Subspaces," *Int'l Conf. Comp. Vis.*, Vancouver, BC, to appear in July 2001.

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

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Date of Deposit: July 31, 2001

I hereby certify that this correspondence is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. § 1.10 on the date indicated above and is addressed to the Assistant Commissioner for Patents and Trademarks, Washington, D.C. 20231 on July 31, 2001.

Dated: July 31, 2001

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2. Everson, R.M. et al., "Inferring the Eigenvalues of Covariance Matrices From Limited, Noisy Data," *IEEE Trans. Sig. Proc.*, no. 48, vol. 7, pps. 2083-2091, 2000.
3. Georgiades, A.S. et al., "From Few to Many: Generative Models for Recognition Under Variable Pose and Illumination," *Proc. 4th Int'l Conf. Automatic Face & Gesture Recognition*, pps. 264-270, March 2000.
4. Hallinan, P., "A Low-Dimensional Representation of Human Faces for Arbitrary Lighting Conditions," *CVPR 94*, pps. 995-999, 1994.
5. Ishiyama, R. et al., "A New Face-Recognition System with Robustness Against Illumination Changes," *IARP Workshop Mach. Vis. Appl.*, pps. 127-131, November 2000.
6. Linde, Y. et al., "An Algorithm for Vector Quantizer Design," *IEEE Trans. Commun.*, no. 28, pps. 84-95, 1980.
7. Loeve, M. "Probability Theory," pps. 455-493.
8. Penev, P.S., "Local Feature Analysis: A Statistical Theory for Information Representation and Transmission," Ph.D. Thesis, The Rockefeller University, NY, NY, 1998.
9. Penev, P.S. et al., "The Global Dimensionality of Face Space," *Proc. 4th Int'l Conf. Automatic Face & Gesture Recognition*, pps. 264-270, 2000.
10. Rose, K., "Deterministic Annealing for Clustering, Compression, Classification, Regression, and Related Optimization Problems," *Proc. IEEE*, vol. 86, no. 11, pps. 2210-2239, 1998.
11. Sengupta, A.M. et al., "Distributions of Singular Values for Some Random Matrices," *Phys. Rev. E*, vol. 60, no. 3, pps. 3389-3392, 1999.
12. Silverstein, J.W., "Eigenvalues and Eigenvectors of Large-Dimensional Sample Covariance Matrices," *Contemporary Mathematics*, pps. 153-159, 1986.
13. Tipping, M.E. et al., "Mixtures of Probabilistic Principal Component Analysers," *Neural Comput.*, vol. 11, no. 2, pps 443-482, 1999.

Applicants are submitting copies of the above-cited references. The relevance of the above-identified references has been described in the specification.

Inasmuch as this Information Disclosure Statement is being submitted in accordance with the schedule set out in 37 C.F.R. § 1.97(b), no statement or fee is required.

Respectfully submitted,



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